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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/713,582	11/14/2003	Yoshihide Hoshino	KOY-0020	1997
7590 03/08/2006				
CANTOR COLBURN LLP 55 Griffin Road South Bloomfield, CT 06002			EXAMINER TRAN, LY T	
			ART UNIT 2853	PAPER NUMBER

DATE MAILED: 03/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

A

Office Action Summary	Application No.		Applicant(s)	
	10/713,582		HOSHINO, YOSHIHIDE	
	Examiner		Art Unit	
	Ly T. TRAN		2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) 3-5, 7-9, 11-16, 19-23, 25 and 27-32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 6, 8, 10, 17, 18, 24 and 26 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of species 1 in the reply filed on 12/14/05 is acknowledged. The traversal is on the ground(s) that no serious burden is present in examining the small number of claims. This is not found persuasive because different species requires different search no matter with a small or large number of the claims.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, 6, 8, 10, 17, 18, 26 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mill et al (US. 2003/0030034037) in view Matsumoto et al. (US 2001/0052920).

With respect to claims 1, 2, 6, 8, 10, 17, 18, 24 and 26, Mill et al discloses an ink jet recording apparatus comprising:

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- a serial type recording head which has a plurality of ink jet openings for jetting photo-curable ink toward a recording medium, the ink jet openings being arranged in one or more lines (Fig.8A, 9A: element K, Y, M, C); and
- an irradiation section which is provided adjacent to the recording head in a scanning direction of the recording head, for irradiating an ink jetted on the recording medium with light, the irradiation section having a plurality of irradiation elements (Fig.8A; element 100-1, 100-2) which correspond to the ink jet openings, respectively, and which are arranged in one or more lines in approximately parallel with an arrangement direction of the plurality of ink jet openings (K, Y, M, C), the irradiation element irradiates the ink jetted on the recording medium with light as an approximately parallel pencil.
- the irradiation section further comprises a lens (Fig.14B: element 1016) for approximately equalizing a size of an irradiated portion of the recording medium with a size of a dot formed by the ink on the recording medium, by refracting light radiated from the irradiation element.
- the irradiation section further comprises a lens (Fig.14B)1016) for approximately equalizing a diameter of an irradiated portion of the recording medium in the arrangement direction with a dot diameter formed by the ink on the recording medium by refracting light radiated from the irradiation element.

However, Mill fails to teach controlling the irradiation elements to light at least an irradiation element which corresponds to an ink jet opening and changing an amount of irradiating light to the recording medium which corresponds to the ink jet opening depending upon an amount of the ink jetted by the ink jet opening.

Matsumoto teaches controlling the irradiation elements to light at least an irradiation element which corresponds to an ink jet opening, and changing an amount of irradiating light to the recording medium which corresponds to the ink jet opening depending upon an amount of the ink jetted by the ink jet opening (Column 8: [0106])

It would have been obvious to one having ordinary skill in the art at the time the invention was made to control the amount of irradiation light as taught to Matsumoto. The motivation of doing is to dry the ink with high precision without irregularity.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ly T. TRAN whose telephone number is 571-272-2155. The examiner can normally be reached on M-F (7:30am-5pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on 571-272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LT

March 2, 2006



STEPHEN MEIER
SUPERVISORY PATENT EXAMINER